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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,240	10/14/2004	Dairi Kubo	260008US3PCT	9173
22850 7590 01/19/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER BERGIN, JAMES S	
			ART UNIT 3641	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			01/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/510,240

Applicant(s)

KUBO ET AL.

Examiner

James S. Bergin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/14/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 9-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, line 8, "*said gas generant side*" lacks a proper antecedent basis. In claim 9, lines 9-10, "*said rupture pressure of said through hole through which said conductive pins passes*" lacks a proper antecedent basis. It is unclear whether this rupture pressure is the same rupture pressure as "*a rupture pressure*" of line 8? In claim 9, lines 10-11, "*said rupture pressure of said non-through hole through which said conductive pin does not pass*" lacks a proper antecedent basis. It is unclear whether this rupture pressure is the same rupture pressure as "*a rupture pressure*" of line 8? In claim 9, line 10, the limitation "*is adjusted to be higher*" is indefinite because it is unclear in what sense the rupture pressure can be "*adjusted*" in an assembled gas generator (claim 9 is drawn to a gas generator, and not to the assembly of a gas generator).

Regarding claim 11, it is unclear whether the applicant is attempting to claim that the holder comprises resin or whether the holder is integrally bonded to the ignition device by a resin?

In claim 19, line 4, "*said base portion of said non-through hole*" lacks a proper antecedent basis. It is unclear what "length" is being claimed? Is it the length of the

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holder on the axis parallel to the longitudinal axis of the holder or is it the length of the holder on the axis transverse to the longitudinal axis of the holder (at a 90 degree angle to the longitudinal axis of the holder)?

In claim 20, is indefinite for the following reasons. In claim 20, lines 2-3, "said base portion of a connector attachment hole" lacks a proper antecedent basis and it is unclear whether the "connector attachment hole" is the same element as the non-through hole of claim 9? In claim 20, lines 3-4, "said thickness of said base portion" lacks a proper antecedent basis. In claim 20, line 5, it is unknown what constitutes "a diameter of an inscribed circle in said non-through hole"? Is the inscribed circle actually physically inscribed in the peripheral wall of the non-through hole or is it just a conceptual circle?

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 9 and 20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Smith (US 5,890,735).

The following claims are rejected in as much as they can be understood in view of the indefiniteness as discussed above.

Smith discloses the applicants' gas generator substantially as claimed, including: cup member 25; holder 40; ignition device 42 having a plurality of pins (Figs. 1-7)

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passing; along with the ignition device 42, through the through hole in the holder 40; and non-through holes proximate frangible web 36 (col. 3, line 55 col. 4, line 43), the frangible web 36 rupturing in response to a pressure from the gas generant side of the holed 40.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 5,890,735) in view of Brede et al. (US 7,111,558 B2) or official notice.

The following claims are rejected in as much as they can be understood in view of the indefiniteness as discussed above.

Regarding claim 10, the examiner takes official notice that to vary the size of a vent opening produced by the rupture of a frangible element so as to control the rate of gas flow there-through, was well within the skill level of one of ordinary skill in the art at the time that the invention was made. In view of this official notice, it would have been obvious to one of ordinary skill in that art at the time that the invention was made, to vary the size of the Smith's frangibly produced opening in Smith's portion 36 of holder 40, so as to control the flow rate of generated gas there-through.

Regarding claim 11-14, Smith discloses the applicants' gas generator substantially as claimed as discussed above. Regarding claim 11, Smith's holder 40 is

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integral with the ignition device 42. Smith does not disclose that the holder comprises resin. The examiner takes official notice that holders formed of resin were well known in the inflator art at the time of invention, the resin holder insulating the inflator. In view of this official notice, it would have been obvious to one of ordinary skill in the art at the time that the invention was made, to form Smith's holder from a resin so as to help insulate the inflator. Alternatively, Brede et al. disclose an injected molded plastic holder 4, that insulates the inflator contents from moisture and electrostatic discharges causing unintentional discharge. In view of Brede et al., it would have been obvious to one of ordinary skill in the art at the time that the invention was made, to form Smith's holder from a plastic resin, so as to help insulate the inflator from moisture and electrostatic discharges causing unintentional discharge.

Regarding claims 15-18, Brede et al. disclose the reinforcement member 3 made from metal, the member 3 having opening 8 therein so as to improve interlocking of the metal insert with the plastic resin of the holder 4. In view of Brede et al., it would have been obvious to one of ordinary skill in the art at the time that the invention was made, to provide Smith's holder 40 with a metal reinforcement member 3, so as to increase the structural integrity of the Smith's holder 40.

In as much as claim 19 can be understood in the light of the indefiniteness discussed above, Smith discloses the claimed depth or in the alternative, the examiner takes official notice that it would have been obvious to select an appropriate thickness for Smith's frangible element 36 of the holder 40, such a thickness selected based on

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the frangibility required and resulting in the depth of Smith's non-through hole potentially being in the range claimed by the applicant.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-FORM 892.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Bergin whose telephone number is 571-272-6872. The examiner can normally be reached on Monday - Wednesday and Friday, 8.30 - 5.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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Customer Service Representative or access to the automated information system, call

800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "James S. Bergin", followed by a horizontal line.

James S. Bergin